

Friday, March 31, 2017 7:09:58 PM

158807

Page 1

N900040100

Setup Start *NS1*

Stop *NS2*

3

Cust Item ID:

3

Customer:

Reference: SCHEDULED

Approvals: Process Plan: _____ Date: MAR 31 2017 Tooling: _____

Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____

Date: _____

Stop *NR2*

100		0.00				DAS 08 9-29
100	BAND SAW		B.	17-04-05	3	φ
Bandsaw	Memo	0.02				
Jeaspa Bandsaw	Cut Blanks at 4.250"					

110

HAAS 5AXIS

HAAS CNC vertical machine #5

HAAS CNC VERTICAL MACHINING #1

Memo

1-Machine per folio FB436 (D5354-2)

DWG-REV: C

FOLIO REV: AA

2- deburr and break all sharp edge as per dwg

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause				FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____					
Misidentified ☐	Past Due ☐						

158807

Friday, March 31, 2017 7:09:58 PM

N900040100

Setup Start ***NS1***

Stop ***NS2***

Start Date: 4/3/2017 **Start Qty:** 3.00 ***3***

Cust Item ID:

Required Date: 4/5/2017 **Req'd Qty:** 3.00 ***2***

Customer:

Reference: SCHEDULED

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

120 QC2- Inspect parts off machine FAI/FAIB

0.08

L. 17-04-08

(5)

 ϕ

DAS
08
9-88

120

0.50

Memo

QC

Quality Control

130 QC8- Inspect parts - second check

0.00

0.06

3



DAS
14
9-89

130

QC

Quality Control

140 Outsource process-Anodize per QSI017 4.1.10.1

0.00

216.00

APR 19 2017

DAS
13
9-89

140

Outsource4

Outsource process - Anodize

Memo

Issue P/O to ATG: 36011

Black Anodize as per Dwg D5354

Certification of Conformity is required.

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
PAC 2/1				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Work Order ID 158807

Friday, March 31, 2017 7:09:58 PM

158807

Page 3

Item ID: D5354-042 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: R66 Fwd Clamp Assembly, RH
Start Date: 4/3/2017 Start Qty: 3.00 ***3*** Cust Item ID:
Required Date: 4/5/2017 Req'd Qty: 3.00 ***3*** Customer:
Reference: SCHEDULED

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	Receive & Inspect for Damage & Mat'l Certs	0.00							
150									
Packaging	Memo	0.06							
Packaging	Certification of Comformity is required.								
155	QC5- Inspect part completeness to step on W/O	0.00							
155									
QC	Memo	0.06							
Quality Control									

3x 80175-11

3

DAS
38
9-89

MAY 11 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Work Order ID 158807

Friday, March 31, 2017 7:09:58 PM

158807

Page 4

Item ID: D5354-042 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: R66 Fwd Clamp Assembly, RH
Start Date: 4/3/2017 Start Qty: 3.00 ***3*** Cust Item ID:
Required Date: 4/5/2017 Req'd Qty: 3.00 ***3*** Customer:
Reference: SCHEDULED

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160		0.00							
160						3	Ø	MAY 16 2017	DAS 19 9-29
Small Fab	Memo	3.68							
Small Fab	-Assemble as per dwg.								
	-Secure nuts as per dwg. (Note #8)								
	-Apply proseal as per dwg. (Note #9)								
	Batch: 136953								
	Exp. date: 10/1/17								
170	QC5- Inspect part completeness to step on W/O	0.00							
170						3			DAS 38 9-29
QC	Memo	0.06							
Quality Control								MAY 16 2017	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : _____					

Work Order ID 158807

Friday, March 31, 2017 7:09:58 PM

158807

Page 5

Item ID: D5354-042 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: R66 Fwd Clamp Assembly, RH
Start Date: 4/3/2017 Start Qty: 3.00 ***3*** Cust Item ID:
Required Date: 4/5/2017 Req'd Qty: 3.00 ***3*** Customer:
Reference: SCHEDULED

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	Identify as per dwg & Stock Location: SH16	0.00							
180									
Packaging	Memo	0.03				3	MAY 17 2017		DAS 6 9-89
Packaging									
190	QC21- Final Inspection - Work Order Release	0.00							
190									
QC	Memo	0.30							17/5/17
Quality Control									

DAS
21
9-89 **MAY 17 2017**

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
				Completed By _____					
				Lead hand / Supervisor Approval Verification _____					
				QC / QA Coordinator Approval _____					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

Friday, March 31, 2017 7:09:57 PM

Page 1

Work Order ID: 158807

158807

Parent Item: D5354-042

D5354-042

Parent Item Name: R66 Fwd Clamp Assembly, RH

Start Date: 4/3/2017

Required Date: 4/5/2017

Start Qty: 3.00

Required Qty: 3.00

Comments: IPP REV.A New issue 16/07/08 JFS Verified by: JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6B1.250X04.50 0		Purchased	No			100	f	8.0764	0.354	1.117895			

M6061T6B1 250X04 500

6061-T6 Bar 1.25 X 4.50

17-04-05

Location	Loc Qty	Loc Code
MAT004	8.0764	
→ m133038	0.3014	
→ m134776	7.775	

D5316-1

Manufactured No

160 Each

9.0000

1

3

MAY 16 2017

DAS
19
9-89

D5316-1

T-Bolt Strap

Location	Loc Qty	Loc Code
ST163	9	
155235	9	
	160	Each
	0.0000	

D5351-1

Manufactured No

160 Each

0.0000

2

6

MAY 16 2017

DAS
19
9-89

D5351-1

T-Bolt Spacer

158932

6

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					

Root Cause			FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date	☐	Manufacturing Process	OTHER : _____							
Misidentified	☐	Past Due								

Picklist Print

Friday, March 31, 2017 7:09:57 PM

Work Order ID: 158807

158807

Parent Item: D5354-042

D5354-042

Parent Item Name: R66 Fwd Clamp Assembly, RH

Start Date: 4/3/2017

Required Date: 4/5/2017

Start Qty: 3.00

Required Qty: 3.00

MS21043-3

Purchased

No

160

Each

936.0000

2

6

MS21043-3

MAY 16 2017

DAS
19
9-89

Nut

Location

Loc Qty

Loc Code

FG	80	
103691	80	
FP001	203	
m130673	11	
m136182	192	
GA	215	
m133990	27	
m136182	188	
ST302	369	
m136986	369	
ST304	69	
m131340	69	

NAS1149D0332J

Purchased

No

160

Each

1,682.000

2

6

NAS1149D0332.J

MAY 16 2017

DAS
19
9-89

Washer

Location

Loc Qty

Loc Code

FP	28	
m136015	28	
GA	522	
m136643	522	
ST260a	1000	
m137075	1000	
ST264	132	
m136015	132	

DQA: _____ Date: _____



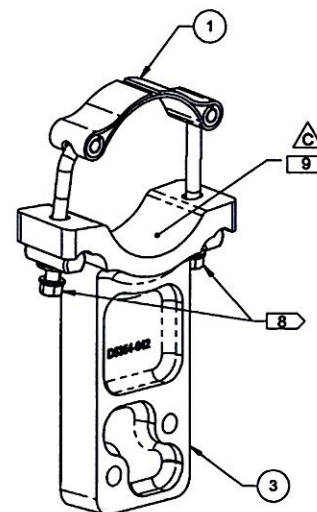
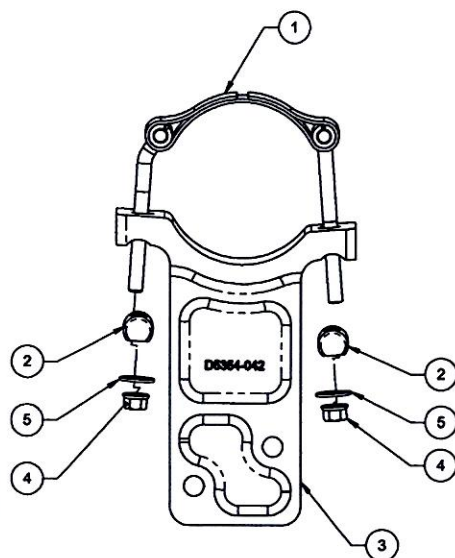
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

ITEM	QTY	P/N	DESCRIPTION
	X	D5354-042	R66 FWD CLAMP ASSY, RH
1	1	D5316-1	T-BOLT STRAP
2	2	D5351-1	T-BOLT SPACER
3	1	D5354-2	SUPPORT, RH
4	2	MS21043-3	NUT, SELF-LOCKING
5	2	NAS1149D0332J	WASHER
6	A/R	PROSEAL 890	SEALANT



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 15807

07/03/31

D5354-042 R66 FWD CLAMP ASSY, RH ⚠

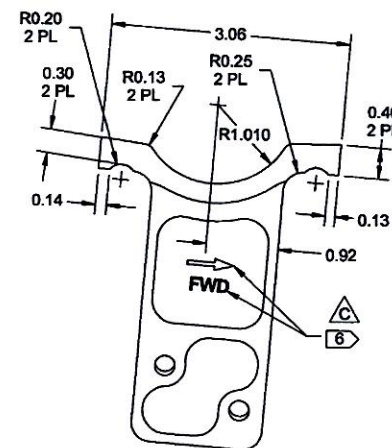
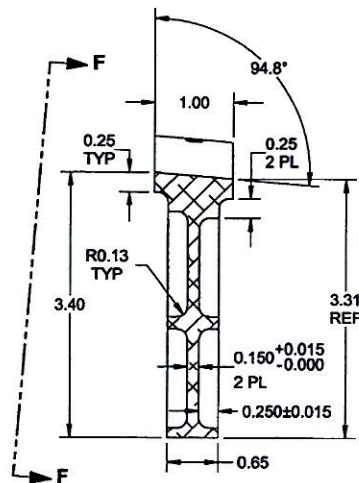
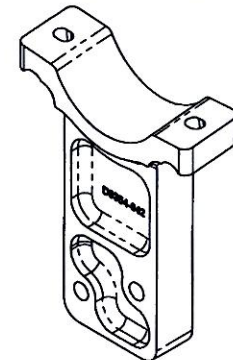
NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: AS SHOWN ON D5354-2
- 7) WEIGHT: 0.37 lbs
- 8) SECURE NUTS WITH 1-2 THREAD AS SHOWN
- 9) APPLY AN EVEN LAYER OF PROSEAL 890 (0.02" - 0.03" THICK) ON INSIDE SURFACE

DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	VS	DRAWING NO.	REV. C
MFG. APPR.	JFS	D5354	SHEET 2 OF 4
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	R66 FWD CLAMP ASSEMBLY	NTS
DATE	17.02.09	COPYRIGHT © 2015 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

RELEASED
2017-03-22

APPROVED



VIEW F-F

NOTES:

- 1) MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR
PER QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)
OR ASTM B211 OR ASTM B221
REF DART SPEC M6061T6B
- 2) FINISH: ANODIZE BLACK PER MIL-A-8625F TYPE I OR IB OR IC OR II OR IIB CLASS 2
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH ASSEMBLY P/N, FWD & ARROW PER DART QSI 044 6.3 (CNC ENGRAVING)
USING MAX DEPTH OF 0.010 WITH MIN RADIUS OF 0.010
- 7) WEIGHT: 0.29 lbs
- 8) UNDEFINED FEATURES CONTROLLED BY CAD FILE D5354-2 REV. C.SLDPRT

RELEASED
2017-03-22

APPROVED

DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D5354 TITLE R66 FWD CLAMP ASSEMBLY	REV. C
DRAWN	RF		SHEET 4 OF 4
CHECKED	VS		SCALE
MFG. APPR.	JFS		NTS
APPROVED	HS		
DE APPR.	DS		
DATE 17.02.09		COPYRIGHT © 2015 BY DART AEROSPACE LTD THIS DOCUMENT IS A CONFIDENTIAL PROPERTY OF DART AEROSPACE LTD AND IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.	

DART AEROSPACE LTD		Work Order:	
Description: Support, RH		Part Number:	D5354-2
Inspection Dwg: D5354 Rev: B		Page 1 of 1	

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.50	+/-0.030	0.497	✓		Vern	GA-13
Ø0.204	+0.005/-0.001	Ø0.204	✓		"	"
0.20	+/-0.030	0.199	✓		"	"
0.279	+/-0.010	0.277	✓		"	"
Ø0.257	+0.005/-0.001	Ø0.258	✓		"	"
1.28	+/-0.030	1.275	✓		"	"
0.13	+/-0.030	0.125	✓		Mic	GA-03
R0.25	+/-0.030	R0.250	✓		R-G	ref.
1.000	+/-0.005	0.999	✓		H-G	31006
1.67	+/-0.030	1.670	✓		Vern	GA-13
0.31	+/-0.030	0.309	✓		"	"
0.50	+/-0.030	0.500	✓		"	"
0.500	+/-0.005	0.500	✓		H-G	31006
0.15	+/-0.030	0.150	✓		Vern	GA-13
0.13	+/-0.030	0.125	✓		Mic	GA-03
3.40	+/-0.030	3.393	✓		H-G	31006
R0.13	+/-0.030	R0.125	✓		R-G	ref.
0.25	+/-0.030	0.245	✓		Vern	GA-13
1.00	+/-0.030	0.997	✓		"	"
94.8°	+/-0.5°	94.8°	✓		Angle M.	CNC-17
0.25	+/-0.030	0.239	✓		H-G	31006
0.150	+0.015/-0.000	0.155	✓		Mic	118-120
0.250	+/-0.015	0.2475	✓		D-G	GA-08
0.65	+/-0.030	0.653	✓		Vern	GA-13
R0.20	+/-0.030	R0.206	✓		R-G	ref.
R0.13	+/-0.030	R0.125	✓		"	"
R0.25	+/-0.030	R0.250	✓		"	"
3.06	+/-0.030	3.054	✓		Vern	GA-13
0.40	+/-0.030	0.396	✓		"	"
0.13	+/-0.030	0.132	✓		"	"
0.14	+/-0.030	0.140	✓		"	"
0.30	+/-0.030	0.306	✓		"	"

Measured by: <u>B.2</u> DAS 08 9-88	Checked by: <u>14</u> DAS 9-88	QC Inspector:
Date: <u>17-04-08</u>	Date: <u>17/04/11</u>	Date:

Engineering Approval: (If necessary)	Date:
--	--------------

Rev	Date	Change	Revised by	Approved
A	17.01.31	New Issue	KJ	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO36011**

Purchase Order Date 4/19/2017
PO Print Date 4/25/2017

Page Number 4 of 5

Order From :

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

VC-ATG001

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name
Vendor Phone

613-446-4544

Ship To Contact
Ship To Phone
Ship Via:
Ship Acct:

VENDOR'S TRUCK

Buyer

Customer POID

Customer Tax #

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 30

CAD

FCA - (Free Carrier)

Line Total:

\$7.5

10 158807

D5354-042 R66 CLAMP
REV. C

5/5/2017

Yes

5/5/2017

BLACK ANODIZE AS PER MIL-A-8625F TYPE 1 OR IB/IC/II/IIB CLASS 2

3.00

\$2.50

\$7.5

DAS
38
9-89

Line Total:

\$7.5

11 158809

D5355-041 AFT CLAMP
REV. C

5/5/2017

Yes

5/5/2017

BLACK ANODIZE AS PER MIL-A-8625F TYPE 1 OR IB/IC/II/IIB CLASS 2

6.00

\$3.25

\$19.

Line Total:

\$19

12 158757

647.7910 ANGLE
BRACKET REV. N/C

5/5/2017

Yes

5/5/2017

BLACK ANODIZE AS PER MIL STD-A-8625 TYPE III, CLASS 2

8.00

\$3.60

\$28

PO Instructions: PRIMER IS SUPPLIED BY DART

Note:

4/25/2017



A.T.G. Industries Inc.
731 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 913270

Date: 05-May-17

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Chantal Lavoie
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
		OUR TRUCK	
Quantity	Description		
Please reference this document's Pack List number on all correspondences regarding this shipment. If you have any questions, please contact us.			
3 ea	Part: D5354-042 R66 Clamp Black Anodize per MIL-A-8625F, Type II, Class 2 Job: 20964	Rev: C Line: 10	DAS 38 9-89 SP17-5-11
6 ea	Part: D5355-041 Aft Clamp Black Anodize per MIL-A-8625F, Type II, Class 2 Job: 20965	Rev: C Line: 11	
8 ea	Part: 647.7910 Angle bracket Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Job: 20966	Rev: N/C Line: 12	
1 ea	Part: ADMINISTRATION FEE Administrative Fee Job: 20967	Rev: N/A Line: 13	
6 ea	Part: 647.3912 Breakaway Tip Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied) Job: 20956	Rev: C Line: 2	
6 ea	Part: 647.3912 Breakaway Tip Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied) Job: 20957	Rev: C Line: 3	
6	Part: 647.3914	Rev: C	
Made in Canada.			



A.T.G. Industries Inc.
731 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 913270

Date: 05-May-17

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Chantal Lavoie
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via
		OUR TRUCK
Quantity	Description	
	Date: <u>05/05/2017</u> Certified Signature: <u>[Signature]</u> Receiver Signature: <u>[Signature]</u> A.T.G Industries Inc. is AS9100 Registered and Nadcap Chemical Processing Accredited. Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt.	
Made in Canada.		